

**REMARKS**

Claims 1-50 are pending in this application. Claims 1, 31, 39, 44 and 49 are independent claims.

By this amendment, claims 1 and 31 are amended, the specification is amended, and Figures 14, 15(a)-15(d) and 16-18 are amended. Support for the amendment to the specification can at least be found in the present specification in the paragraph bridging the last paragraph of page 44 with page 45.

Reconsideration in view of the above amendments and following remarks is respectfully solicited.

**Copies of Initialed PTO-1449 Requested**

Applicants respectfully request a copy of the initialed PTO-1449 submitted on March 10, 2005.

In reviewing the application file, the undersigned has noted that the appropriate initialed Form PTO-1449 in response to the Information Disclosure Statement (IDS) filed on March 10, 2005 has not been received by Applicants. The Examiner is therefore requested to return a copy of the initialed Form PTO-1449 to the undersigned as soon as possible.

**Allowable Subject Matter**

Applicants gratefully acknowledge the Examiner's indication of allowable subject matter in claims 39-50 over the art of record. The Office Action also indicates that claims 3-30, 32, 33 and 35-38 are objected to as being dependent on a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

However, applicants respectfully submit that all of claims 1-50 are allowable, for at least the reasons set forth below.

Drawing Corrections

The Office Action objects to Fig(s). 14, 15(a)-15(d) and 16-18 because only that which is old is illustrated.

Applicants respectfully point out that in amended Figures 14, 15(a)-15(d) and 16-18, the legend "Background Art" is added.

As such, Applicants respectfully request withdrawal of the objections to the drawing and further request that the corrected drawings be approved and made a part of the record of the above-identified application.

The Claims Define Patentable Subject Matter

The Office Action makes the following rejections:

(1) claims 1, 2, 31 and 34 are rejected under 35 U.S.C. §103(a) as being unpatentable over admitted prior art (pages 1-9 of present specification) (hereafter APA) in view of U.S. Patent No. 5,081,653 to Saito (hereafter Saito).

This rejection is respectfully traversed.

Applicants respectfully submit that the combination of APA and Saito fails to teach or suggest each and every feature as set forth in the claimed invention.

The Examiner alleges that the combination of the present disclosure (page 3, line 10 to page 4, line 6) (hereafter APA) with Saito discloses the claimed invention as set forth in independent claims 1 and 31. Applicants respectfully disagree with this allegation.

For example, the Examiner concedes that APA fails to disclose that the detector is being used to detect groups of pulses, as claimed. In an attempt to show this feature, the Examiner imports Saito.

Specifically, the Examiner alleges that Saito discloses a carrier detector (6) for producing a signal indicative of bit clock pulse and the Examiner directs our attention to Saito, col. 3, lines 10-38. As such, the Examiner alleges that it would have been obvious to combine APA with Saito because it would make it capable to accurately identify multilevel modulated signals.

Applicants disagree with the Examiner's allegation. For example, applicants respectfully submit that Saito fails to teach or suggest a detector for detecting groups of pulse having a carrier frequency, as set forth in claims 1 and 31. A close review of Saito reveals that Saito merely detects a carrier signal out of the input modulated signal, instead of *a group of pulses* as alleged by the Examiner.

Specifically, Saito discloses, "the clock pulse regenerator (8) and the carrier detector (6) respectively (emphasis added) detect a clock signal or pulse and a carrier signal out of the input modulated signal." (see Saito, col. 2, lines 28-31).

In other words, when carefully reading Saito, the usage of the term "respectively" is noticed. As such, Saito is reciting features that must be interpreted in the order presented.

For example, when Saito recites that "the clock pulse regenerator (8) and the carrier detector (6) respectively (emphasis added) detect a clock signal or pulse and a carrier signal out of the input modulated signal", Saito is qualifying the regenerator (8) with the clock signal or pulses and is qualifying the carrier detector (6) with the carrier signal. As such, the Examiner is improperly associating the clock signal or pulses with the carrier detector (6). Saito's carrier detector (6) is only detecting a carrier signal, not clock signals or pulses.

Similarly, Saito again uses the term "respectively" in col. 3, lines 16-21, wherein the detector (6) is only being associated with a "carrier section signal", not clock pulses as suggested by the Examiner.

As such, applicants respectfully submit that the Examiner is improperly interpreting Saito and is failing to qualify the appropriate device with the appropriate signal. Applicants further submit that Saito, like APA, fails to teach or suggest detecting groups of pulses having a carrier frequency. Instead, Saito's detector (6) merely detects a single carrier signal. Furthermore, the clock pulse of Saito fails to have a carrier frequency. Therefore, even if elements 6-9 of Saito were considered as the detector, the device of Saito still fails to teach detecting groups of pulses having a carrier frequency.

Furthermore, claim 1 recites, *inter alia*, detecting, based on the received signal and the carrier detection level, group of pulses having a carrier frequency to be detected. In claim 1, an integrator outputs a resultant of the integration as the carrier detection level.

The Examiner alleges that the above noted feature of claim 1 is disclosed by element 9 in Figure 14 of the APA described in the present specification (element 9 corresponds to the integration circuit (22) in Fig. 16. See present specification, page 5, 1<sup>st</sup> paragraph). However, element 9 fails to correspond to the claimed integrator. For example, the integration circuit (9,22) in APA merely corresponds to element 132 of Fig. 2, as described on page 17, 3<sup>rd</sup> paragraph of the present specification. On the other hand, the claimed integrator is, for example, shown in Figure 2 as element 134. Such an integrator of claim 1 is distinguishable from the integration circuit (9,22) for at least the following reasons:

Claim 1 recites, *inter alia*, an integrator for outputting the carrier detection level. Claim 1 also recited a detector for detecting groups of pulses based on this carrier detection level. However, the output of the integration circuit (9,22) in APA fails to correspond to the claimed carrier detection level at least because the output of the integration circuit (9,22) fails to be used by the detector to detect groups of pulses. Applicants respectfully submit that at least because the integration circuit (9,22) in APA fails to output the carrier detection level, and the integrator of claim 1 does indeed output the carrier detection level, the integrator of claim 1 is distinguishable over the integration circuit in APA. Furthermore, the teachings in Saito fail to make up for the deficiencies noted in APA.

Claim 2 recites, *inter alia*, an offset circuit for adding an offset to the carrier detection level. The Examiner has failed to show how/where APA teaches such an offset circuit as set forth in claim 2.

Claims 31 and 34 are rejected on similar grounds as claims 1 and 2, respectively. As such, for at least the same reasons as noted above, respectively, APA and Saito fails to teach or suggest each and every feature as set forth in claims 31 and 34.

As such, for at least the reasons set forth above, applicants respectfully submit that the claimed invention as set forth in independent claims 1 and 31 are distinguishable from the combination of APA and Saito.

Applicant respectfully submits that neither APA nor Saito, taken singularly or in combination, (assuming these teachings may be combined, which applicant do not admit) teach or suggest detecting groups of pulses having a carrier frequency.

To establish a *prima facie* case of Obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art and not based on applicant's disclosure. *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991). See MPEP 706.02(j).

Applicants respectfully submit that not only does the references fail to teach or suggest each and every feature as set forth in the claimed invention, but that one of ordinary skill in the art would not have been motivated to combine/modify the teachings of APA with Saito because there is no teaching or suggestion in any of the references regarding how or why one would modify such systems to arrive at the claimed invention.

Applicants respectfully submit that independent claims 1 and 31 are allowable over the combination of APA and Saito for at least the reasons noted above.

As for each of the dependent claims not particularly discussed above, these claims are

also allowable for at least the reasons set forth above regarding their corresponding independent claims, and/or for the further features claimed therein.

Accordingly, withdrawal of the rejection of claims 1, 2, 31 and 34 under 35 U.S.C. §103(a) is respectfully requested.

Conclusion

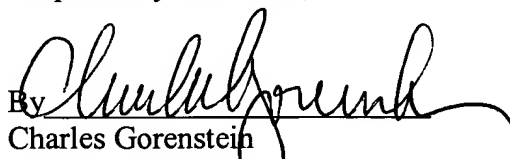
In view of the foregoing, Applicant respectfully submits that the application is in condition for allowance. Favorable reconsideration and prompt allowance are earnestly solicited.

Should the Examiner believe that anything further would be desirable to place this application in better condition for allowance, the Examiner is invited to contact Carolyn T. Baumgardner (Reg. No. 41,345) at (703) 205-8000 **to schedule a Personal Interview.**

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment from or credit any overpayment to Deposit Account No. 02-2448 for any additional fees required under 37 C.F.R. §1.16 or under 37 C.F.R. §1.17; particularly, the extension of time fees.

Dated: June 30, 2005

Respectfully submitted,

By 

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Attachments: Five (5) replacement drawing sheets, Figs. 14, 15(a)-15(d) and 16-18

  
CG/CTB/mpe

**AMENDMENTS TO THE DRAWINGS**

Attached hereto are five (5) replacement sheets of corrected formal drawings that comply with the provisions of 37 C.F.R. § 1.84. These replacement sheets, which depict Figures 14, 15(a)-15(d) and 16-18, replace the original sheets depicting Figures 14, 15(a)-15(d) and 16-18.